



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

52531 7590 01/08/2010

CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 FIFTH AVENUE
SUITE 2800
SEATTLE, WA 98101-2347

EXAMINER

AHMED, SALMAN

ART UNIT

PAPER NUMBER

2476

DATE MAILED: 01/08/2010

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,128	02/27/2002	Marc Bavant	126099	3367

TITLE OF INVENTION: METHOD AND DEVICE TO TRANSFER DATA IN A COMMUNICATION NETWORK COMPRISING A LOW-BIT RATE ARTERY

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	04/08/2010

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PART B - FEE(S) TRANSMITTAL

**Complete and send this form, together with applicable fee(s), to: Mail Mail Stop ISSUE FEE
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885**

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

52531 7590 01/08/2010

CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC
1420 FIFTH AVENUE
SUITE 2800
SEATTLE, WA 98101-2347

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/083,128 02/27/2002 Marc Bavant 126099 3367

TITLE OF INVENTION: METHOD AND DEVICE TO TRANSFER DATA IN A COMMUNICATION NETWORK COMPRISING A LOW-BIT RATE ARTERY

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
-------------	--------------	---------------	---------------------	----------------------	------------------	----------

nonprovisional NO \$1510 \$300 \$0 \$1810 04/08/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
----------	----------	----------------

AHMED, SALMAN 2476 370-230000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 _____
- (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 _____
- 3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee
- ☐ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies _____

4b. Payment of Fee(s); (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.
- ☐ Payment by credit card. Form PTO-2038 is attached.
- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____

Date _____

Typed or printed name _____

Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,128	02/27/2002	Marc Bavant	126099	3367
52531	7590	01/08/2010	EXAMINER	
CHRISTENSEN O'CONNOR JOHNSON KINDNESS PLLC 1420 FIFTH AVENUE SUITE 2800 SEATTLE, WA 98101-2347			AHMED, SALMAN	
			ART UNIT	PAPER NUMBER
			2476	
DATE MAILED: 01/08/2010				

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 812 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 812 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

Notice of Allowability	Application No.	Applicant(s)	
	10/083,128	BAVANT ET AL.	
	Examiner	Art Unit	
	SALMAN AHMED	2476	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to After final amendment filed on 12/14/2009.
2. ☒ The allowed claim(s) is/are 1, 2, 4-7, 9-23 and 25 (Currently renumbered to (1-8, 12-15, 17-19, 9, 11, 16, 20-22 and 10 respectively).
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. 7. <input type="checkbox"/> Examiner's Amendment/Comment 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____. |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

/Salman Ahmed/
Primary Examiner, Art Unit 2476

DETAILED ACTION

Allowable Subject Matter

1. Claims 1, 2, 4-7, 9-23 and 25 are allowed.

Reason for Allowance

2. The following is an examiner's statement of reasons for allowance:

The prior art of record does not teach the following:

In regards to claim 1 the prior art does not teach conveying data in a connection between terminals in a communications network comprising at least one low-bit-rate artery and at least one standard-bit-rate artery, the method comprising: at a first end of the low-bit-rate artery, receiving a plurality of first basic transmission units from different originating terminals, each first basic transmission unit comprising a packet of application data formed according to a second protocol, wherein the packet of application data comprises a plurality of coded frames and a header, each of the plurality of coded frames comprising data received from the different originating terminals according to a first protocol and converted by a compression algorithm; extracting one or more packets of application data from the plurality of first basic transmission units; multiplexing the one or more packets of application data received from the different originating terminals by inserting into a second basic transmission unit for transmission via the low-bit-rate artery to a second end of the low-bit-rate artery; setting an adjustable time lag for transmission of the second basic transmission unit when a first of the one or more packets of application data is inserted into the second basic transmission unit; and at an end of the adjustable time lag, transmitting

Art Unit: 2476

the second basic transmission unit from the first end to the second end of the low-bit-rate artery; at the second end of the low-bit-rate artery, extracting the one or more packets of application data from the second basic transmission unit; inserting the extracted one or more packets of application data into a third basic transmission unit; and transmitting the third basic transmission unit to a terminating terminal.

In regards to claim 11 the prior art does not teach data transmission between an originating terminal and a terminating terminal in a communications network comprising at least one low-bit-rate artery and at least one standard-bit-rate artery, comprising: a multiplexer device in communication with the at least one low-bit-rate artery and at least one standard-bit-rate artery, wherein the multiplexer device is configured to switch packets of compressed data transmitted in basic transmission units according to an adaptation layer protocol among several virtual lines constituted by connections in multiplexed or non-multiplexed mode, wherein data from the originating terminal transmitted on the at least one standard-bit-rate artery is multiplexed with data from another originating terminal onto the at least one low-bit-rate artery, the data being transmitted over the at least one low-bit-rate artery at an end of an adjustable time lag, the time lag being set when a first packet is inserted in a basic transmission unit; and an adaptation unit associated with the terminating terminal, wherein the adaptation unit is configured to: extract the packets from the basic transmission units; extract the data from the packets; determine a mode of operation of a connection between an originating terminal and a terminating terminal using signaling data inserted in the packets and indicating the mode of operation, the mode of operation comprising at

Art Unit: 2476

least one of voice, fax, or a compression algorithm used to compress the data; and decompress the data in order to recreate the data from the originating terminal.

In regards to claim 15 the prior art does not teach one or more low-bit-rate arteries; one or more standard-bit-rate arteries; a multiplexer device in communication with the one or more low-bit-rate arteries and the one or more standard-bit-rate arteries, wherein the multiplexer device is configured to switch packets of compressed data transmitted in basic transmission units among several virtual lines constituted by connections in multiplexed or non-multiplexed mode, wherein data from an originating terminal transmitted on the one or more standard-bit-rate arteries is multiplexed with data from another originating terminal onto the one or more low-bit-rate arteries and is transmitted over the one or more low-bit-rate arteries at an end of an adjustable time lag, the time lag being set when a first packet is inserted in a basic transmission unit; and a device associated with a terminating terminal, wherein the device is configured to extract the packets from the basic transmission units; extract the data from the packets; determine a mode of operation of a connection between the originating terminal and the terminating terminal using signaling data inserted in the packets and indicating the mode of operation, the mode of operation comprising at least one of voice, fax, or a compression algorithm used to compress the data; and decompress the data in order to recreate data from the originating terminal.

In regards to claim 22 the prior art does not teach a first adaptation unit associated with an originating terminal, wherein the first adaptation unit is configured to receive, from the originating terminal, data according to a first protocol,

Art Unit: 2476

convert the received data into coded frames using a compression algorithm, form a packet of application data comprising a plurality of the coded frames according to a second protocol, and insert the packet into a first basic transmission unit at a rate of one packet per unit for transmission to a first end of a low-bit-rate artery; a first multiplexer device associated with the first end of the low-bit-rate artery, wherein the first multiplexer device is configured to extract the packet from the first basic transmission unit and from first basic transmission units received from different originating terminals, and wherein the first multiplexer device is further configured to multiplex the extracted packets into a second basic transmission unit for transmission to a second end of the low-bit-rate artery at an end of an adjustable time lag, the time lag being set when a first packet is inserted in the second basic transmission unit; a second multiplexer device associated with the second end of the low-bit-rate artery, wherein the multiplexer device is configured to extract the packets from the second basic transmission unit, determine the terminating terminal to which each of the packets belong, and insert each of the packets into a third basic transmission unit for transmission to the terminating terminal; and a second adaptation unit associated with the terminating terminal, wherein the second adaptation unit is configured to: extract the packets from the third basic transmission unit; determine whether any packet in the basic transmission units has been lost; determine a mode of operation of a connection between the originating terminal and the terminating terminal using signaling data inserted in the packets and indicating the mode of operation, the mode of operation comprising at least one of voice, fax, or a compression algorithm used to compress the

Art Unit: 2476

data; extract the coded frames from the packets; and decompress the coded frames to recreate the data from the originating terminal.

In regards to claim 23 the prior art does not teach one or more low-bit-rate arteries; one or more standard-bit-rate arteries; a first adaptation unit associated with an originating terminal, the first adaptation unit configured to receive data from the originating terminal, convert the received data into coded frames, form a packet of application data comprising a plurality of the coded frames, and insert the packet into a first basic transmission unit for transmission to a first end of a low-bit-rate artery; a first multiplexer device associated with an upstream switch at the first end of the low-bit-rate artery, wherein the first multiplexer device is configured to extract the packet from the first basic transmission unit and from a first basic transmission unit received from a different originating terminal, and wherein the first multiplexer device is further configured to multiplex the extracted packets into a second basic transmission unit for transmission to a second end of the low-bit-rate artery at an end of an adjustable time lag, the time lag being set when a first packet is inserted in the second basic transmission unit; a second multiplexer device associated with a downstream switch at the second end of the low-bit-rate artery, the multiplexer device configured to extract the packets from the second basic transmission unit, determine the terminating terminal to which each of the packets belong, and insert each of the packets into a third basic transmission unit for transmission to the terminating terminal; and a second adaptation unit associated with the terminating terminal, the second adaptation unit configured to: extract the packets from the third basic transmission unit;

Art Unit: 2476

determine a mode of operation of a connection between the originating terminal and the terminating terminal using signaling data inserted in the packets and indicating the mode of operation, the mode of operation comprising at least one of voice, fax, or a compression algorithm used to compress the data; extract the coded frames from the packets; and recreate the data from the coded frames.

The prior art alone or in combination fails to jointly suggest or teach the claimed combination of features as taught by the instant application. Therefore claims 1, 2, 4-7, 9-23 and 25 are to be deemed allowable over prior art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SALMAN AHMED whose telephone number is (571)272-8307. The examiner can normally be reached on 9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571)272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2476

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Salman Ahmed/

Primary Examiner, Art Unit 2476